

NAVSEA  
STANDARD ITEM

FY-04

ITEM NO: 009-16  
DATE: 30 AUG 2002  
CATEGORY: II

1. SCOPE:

1.1 Title: Electronic Equipment; repair

2. REFERENCES:

2.1 Equipment Technical Manual

2.2 407-5291780, Standard Electromagnetic Interferences (EMI) Survey Procedures

2.3 SE000-01-IMB-010, Navy Installation and Maintenance Book (NIMB), Section VI, **Electronics Installation and Maintenance Book - General Maintenance** (Source CD: N0002400003)

2.4 SE000-01-IMB-010, Navy Installation and Maintenance Book (NIMB), Section IX, **Installation Standards** (Source CD: N0002400003)

2.5 S9300-A6-GYD-010, Electrical Workmanship Inspection Guide for Surface Ships and Submarines

2.6 IA PUB-5239-31, Information Assurance Shipboard Red/Black Installation Publication

2.7 NSTISSAM TEMPEST/2-95, Red/Black Installation Guidance (FOUO)

2.8 MIL-STD-1310, Shipboard Bonding, Grounding, and Other Techniques for Electromagnetic Compatibility and Safety

3. REQUIREMENTS:

3.1 Disassemble equipment for cleaning, inspection, and repair, using 2.1 for guidance.

(V) "VISUALLY INSPECT"

3.1.1 Visually inspect components prior to cleaning to detect evidence of casualties and deteriorating conditions that may not be apparent after cleaning.

3.1.2 Clean equipment and remove foreign matter.

3.1.3 Dry equipment, removing moisture and cleaning solvents.

3.1.4 Inspect equipment for applicable electromagnetic interference (EMI) fixes using Shipboard Electromagnetic Compatibility Improvement Program (SEMCIP) Technical Assist Network (STAN) in accordance with 2.2.

3.1.4.1 Submit **one** legible copy of a report, **in hard copy or electronic media**, listing the applicable EMI fixes not installed and EMI fixes that have been improperly installed, to the SUPERVISOR.

(V) "INSPECT AND TEST TO DESIGN CHARACTERISTICS"

3.2 Inspect and test electrical and mechanical components, assemblies, subassemblies, equipment enclosures, internal circuitry, and enclosure hardware to design characteristics and determine missing and defective components, circuitry, and enclosure hardware in accordance with 2.1.

3.2.1 Remove **existing** and install new electrical and mechanical components, assemblies, subassemblies, internal circuitry, and enclosure hardware **in place of those found to be missing or defective**. New material shall conform to the requirements of 2.1.

3.2.1.1 Soldering, desoldering, and removal of components and circuitry shall be in accordance with Section 4 of 2.3.

3.2.1.2 Miniature and microminiature repair of printed circuit boards shall be in accordance with Sections 5 and 6 of 2.3.

3.2.1.3 New wiring shall conform to MIL-**DTL**-16878. Wire size and color code shall be in accordance with 2.1. Individual wires in harnesses and chassis wiring may be plain white conductors with sleeve identification markers at each end, stenciled with indelible ink to indicate color coding.

(V) "INSPECT SHIELDING TERMINATIONS"

3.3 Inspect braided wire shielding terminations for conformance to Paragraph 2-19.3 of 2.4.

3.3.1 Remove **existing** and install new grounding sheath connectors **in place of those found to be missing or defective**. Installation shall be in accordance with Paragraph 2-14 of 2.4.

(V) "INSPECT WIRE CONNECTIONS"

3.4 Inspect terminal board wire connections for termination with lugs conforming to SAE-AS7928 of each conductor at the terminal board connections.

3.4.1 Remove **existing** and install new lugs **in place of those found to be missing or defective**, using 2.5 for accept or reject criteria. New lugs shall conform to SAE-AS7928.

(V) "INSPECT WIRE MARKERS"

3.5 Inspect for missing and defective wire markers.

3.5.1 Remove **existing** and install new wire markers **in place of those found to be missing or defective**, using 2.5 for accept or reject criteria. New wire markers shall conform to SAE-AMS-DTL-23053, Class One, white, marked with indelible ink.

3.5.1.1 Sleeving shall be marked in accordance with 2.1.

3.6 Correct discrepancies found in terminal board connections in accordance with 2.1 and as modified by applicable field changes identified on the field change accomplished plate.

(V) "INSPECT FOR SLACK"

3.7 Inspect existing cabling and cable harnesses between hinged parts and between chassis and parts which are subject to removal for slack to prevent breaking of individual wires by repeated flexing and for chafing protection.

3.7.1 Provide slack in accordance with Paragraph 2-15 of 2.4 to prevent breaking of individual wires.

3.7.2 Install new chafing protection in accordance with Paragraph 2-15 of 2.4.

3.8 Tie loose harness lacing in accordance with Paragraph 2-15.2 of 2.4.

3.9 Secure loose wiring harness clamps and install new plastic clamps where found to be missing or defective, in accordance with Paragraph 2-15.3 of 2.4.

3.10 Adjust relays and burnish contacts in exposed type relays and switches.

3.11 Remove high spots on pinion and gear teeth by stoning.

3.12 Adjust and align mechanical components in accordance with 2.1.

3.13 Assemble equipment using 2.1 for guidance.

3.13.1 Tighten loose controls and hardware. Free-up binding in moving parts, controls, switches, chassis slides, and runners.

3.13.2 Lubricate equipment in accordance with 2.1.

3.13.3 Install heat dissipating tube shields conforming to MIL-S-24251.

3.14 Bond and ground equipment in accordance with 2.6 through 2.8.

3.15 Energize the equipment; calibrate, adjust, and align to achieve optimum operational characteristics in accordance with 2.1.

3.16 Update field change accomplished plate to indicate completed field changes when the Work Item directs the installation of new field changes.

4. NOTES:

4.1 Equipment technical manual will be listed in the invoking Work Item.

**4.2 Shipboard Electromagnetic Compatibility Improvement Program (SEMCIP) Technical Assist Network (STAN) referred to in 3.1.4 is available at [www.semcip.com](http://www.semcip.com).**